

МЕЂУНАРОДНА НАУЧНА КОНФЕРЕНЦИЈА
Ефекти примене физичке активности
на антрополошки статус деце, омладине и одраслих
Зборник сажетака



Book of abstracts
International Scientific Conference
Effects of Physical Activity Application to
Anthropological Status with Children, Youth and Adults



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Republic of Serbia



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MINISTRY OF
YOUTH AND
SPORT



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RAD PO SESIJAMA / *WORK IN SESSION*

SESIJA 7 / SESSION 7

Neuromišićni faktori fizičke aktivnosti
Neuromuscular factors of physical activity

AMF II / Hall 2

12:15-14:00

Moderator / *Chairman*: **prof. dr Aleksandar Nedeljković**

12:15 - 12:20	Uvodna reč / <i>Introduction</i>	
12:20 - 12:35	Miloš Paunović, Saša Veličković, Aleksandra Aleksić – Veljković, Dragana Filipović	Unutrašnje opterećenje prilikom doskoka u sportskoj gimnastici u zavisnosti od strukture strunjača
12:35 - 12:50	Branislav Rajić, Carlos Pablos Abella, Karišik Siniša	Uticaj kombinovanog i klasičnog trenažnog procesa na odnos gradijenta mišićne sile i mišićne sile opružaća nogu kod odbojkašica: deskriptivna analiza
12:50 - 13:05	Mitevski, Orce Popeska, Biljana Nikovski, Goran Klincarov, Ilija	Manifestation, assessment and evaluation of explosive strength at 7 years old children
13:05 - 13:20	Tijana Purenović-Ivanović, Ružena Popović, Milan Dolga	Relations of the students' abilities and success in Rhythmic: gender differences
13:20 - 13:35	Robert Ropret, Miloš Tomić, Ivan Rakić	Asimetrija nogu kod skijaša
13:35 - 13:45	Završna reč / <i>Conclusions</i>	

14:00 – 14:15 Plenarni rad – Zaključni rad Konferencije / *Plenary – End of Conference*

Moderator / *Chairman*: **prof. dr Aleksandar Nedeljković**

AMF I / Hall 1

SESIJA 7

NEUROMIŠIĆNI FAKTORI FIZIČKE AKTIVNOSTI

SESSION 7

NEUROMUSCULAR FACTORS OF PHYSICAL ACTIVITY

MANIFESTATION, ASSESSMENT AND EVALUATION OF EXPLOSIVE STRENGTH AT 7 YEARS OLD CHILDREN

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Republic of Macedonia

Introduction

Changes in motor abilities are one of the main criteria for creation of final appraisal for PE as well as a criteria for following of individual progress and improvement of every child. These parameters are highly related with the anticipation of different motor skills and habits (Matič, 1978). Explosive strength is one of the abilities that define childrens' motor space and it is highly related with the successful performance of many movements. In different stages of childrens development, explosive strength is manifested differently. Therefore, the aim of this paper is to determine the metric characteristics of tests used for evaluation of explosive strength at 7 years old children, as well as norms for its objective evaluation and following of childrens development.

Method

This survey is realised as a part of larger study (Popeska, 2011) realised on a sample of 123 seven - years old children, pupils in the second grade in five primary schools in Skopje, Republic of Macedonia. Explosive strength was estimated applying following four tests: Standing broad jump (ESSDM), Throwing medicine ball 1 kg from standing position (ESFMST), Throwing medicine ball 1 kg from sitting position (ESFMG) and 20m dash running (ES20VS). Tests characteristic were established using Crombach α и Spearman – Brown (SB) coefficients of reliability, Pearson coefficient of correlation and factor analysis for estimation of factor validity of the tests and Kaiser-Meyer-Olkin's measure used for estimation of reliability and representativity. The percentile distribution was used as a basis for determination of norms for evaluation of children's achievements in motor tests for estimation of explosive strength.

Results and discussion

Statistical analysis of test results, indicates that all four used tests are discriminative. According the asymmetry of distribution of tests results, except the test Standing broad jump (ESSDM) which is easy to perform by the seven years old children, other three tests are moderately difficult for performance. According the values of significant roots, projections of isolated factor and communalities obtained using Hotelling procedure, all applied tests are valid. The high coefficients of reliability points out on significant highly reliable tests. The coefficient of representativity obtained at all four movement tasks is at the level of significance (.50). These results indicates on good metric characteristics of the tests for estimation of explosive strength. Based on this, we calculated and suggested adequate norms for evaluation of children's achievements as a manner for objective following and assesment of childrens improvement.

Conclusion

Results obtained in this survey point out that all four tests used for estimation of explosive strength at 7- years old children have good metric characteristics. According the high values of parameters for estimation of tests characteristics, especially high values for validity and reliability obtained for the tests Standing broad jump (ESSDM) and Throwing medicine ball from sitting position (ESFMG), we recommend these two tests as most suitable for further use with 7 – years old children.

Key words: test characteristics, explosive strength, 7 - years old children

References

1. Bala, G., Stojanović, V. M. i Stojanović, M. (2007) *Merenje i definisanje motoričkih sposobnosti dece*. Novi Sad: Fakultet sporta i fizičkog vaspitanja.
2. Popeska, B (2011) *Development of morphologic and motor dimensions at 6 and 7 years old children*. Unpublished doctoral dissertation, Skopje: Faculty for Physical Culture